

Abstract of the Disclosure:

Disclosed is a semiconductor radiation detector element of Schottky barrier type, comprising: a compound semiconductor crystal including cadmium and tellurium as main components; and voltage application means
5 for applying voltage to the compound semiconductor crystal. According to the present invention, said voltage application means includes a compound of indium, cadmium and tellurium: $\text{In}_x\text{Cd}_y\text{Te}_z$ formed on one surface of the compound semiconductor crystal. Preferably, the rate "z" of occupation of tellurium in the compound $\text{In}_x\text{Cd}_y\text{Te}_z$ is in the range of not less than 42.9%,
10 but not greater than 50% by ratio of number of atoms. Furthermore, preferably, the rate "y" of occupation of cadmium in the compound $\text{In}_x\text{Cd}_y\text{Te}_z$ is in the range of not less than 0%, but not greater than 10% by ratio of number of atoms.